the box pro

Achat 208 HL / 208 HR

passive mid-range speaker

th•mann
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user manual

Musikhaus Thomann
Treppendorf 30
96138 Burgebrach
Germany
Telephone: +49 (0) 9546 9223-0
E-mail: info@thomann.de
Internet: www.thomann.de

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1 General notes

This user manual contains important information on safe operation of the device. Read and follow all safety notes and all instructions. Save this manual for future reference. Make sure that it is available to all persons using this device. If you sell the device to other users, be sure that they also receive this manual.

Our products are subject to a process of continuous development. We therefore reserve the right to make changes without notice.

Symbols and signal words

This section provides an overview of the symbols and signal words used in this user manual.

Signal word	Meaning
DANGER!	This combination of symbol and signal word indicates an immediate dangerous situation that will result in death or serious injury if it is not avoided.
WARNING!	This combination of symbol and signal word indicates a possible dangerous situation that can result in death or serious injury if it is not avoided.
CAUTION!	This combination of symbol and signal word indicates a possible dangerous situation that can result in minor injury if it is not avoided.
NOTICE!	This combination of symbol and signal word indicates a possible dangerous situation that can result in material and environmental damage if it is not avoided.

Warning signs	Type of danger
	Warning – suspended load.
	Warning – danger zone.

2 Safety notes

Intended use

This device is intended to be used in a sound reinforcement system. Use the device only as described in this user manual. Any other use or use under other operating conditions is considered to be improper and may result in personal injury or property damage. No liability will be assumed for damages resulting from improper use.

This device may be used only by persons with sufficient physical, sensorial, and intellectual abilities and having corresponding knowledge and experience. Other persons may use this device only if they are supervised or instructed by a person who is responsible for their safety.

Safety

DANGER!

Danger for children

Ensure that plastic bags, packaging, etc. are disposed of properly and are not within reach of babies and young children. Choking hazard!

Ensure that children do not detach any small parts (e.g. knobs or the like) from the unit. They could swallow the pieces and choke!

Never let children unattended use electrical devices.

WARNING!

Hearing damage

These devices can produce volume levels that may cause temporary or permanent hearing impairment in a short period of time.

Set up the devices so that no persons can stay in their immediate vicinity. The devices must not be used as stage monitors.

CAUTION!

Risk of injury due to heavy weight

Due to the heavy weight of the device, at least two persons are required for transport and installation.

NOTICE!

Operating conditions

This device has been designed for indoor use only. To prevent damage, never expose the device to any liquid or moisture. Avoid direct sunlight, heavy dirt, and strong vibrations.

3 Features

Special features of this device:

- 2 × horn-loaded 8" mid-frequency transducers and 1 × 1.4" high-frequency driver
- 2 × NL4 connections (1+, 1-)
- Flying tracks on top and bottom
- Black textured coating
- M10 thread for speaker tripod mounting flange
- Handles
- Link Bar for coupling two Achat 208 H speakers (option)
- Adapter plate for stacking on top of Achat 115SUB, Achat 118, TP 118/800 and TP 218/1600 (option)

4 Installation

Unpack and carefully check that there is no transportation damage before using the unit. Keep the equipment packaging. To fully protect the device against vibration, dust and moisture during transportation or storage use the original packaging or your own packaging material suitable for transport or storage, respectively.

Establish all connections as long as the unit is switched off. Use the shortest possible high-quality cables for all connections.

WARNING!

Risk of injury caused by falling objects

Make sure that the installation complies with the standards and rules that apply in your country. Always secure the device with a secondary safety attachment, such as a safety cable or a safety chain.

WARNING!

Hearing damage

These devices can produce volume levels that may cause temporary or permanent hearing impairment in a short period of time.

Set up the devices so that no persons can stay in their immediate vicinity. The devices must not be used as stage monitors.

CAUTION!

Risk of injury due to heavy weight

Due to the heavy weight of the device, at least two persons are required for transport and installation.

NOTICE!

Possible property damage by magnetic fields

Loudspeakers produce a static magnetic field. Therefore, maintain an appropriate distance to devices that can be adversely affected or damaged by an external magnetic field.

NOTICE!

Use of stands

When mounting the device onto a stand, ensure that the stand is in a safe and stable position and that the weight of the device does not exceed the maximum permissible load capacity of the stand.

4.1 Tips on handling speakers

We recommend you to set up the speakers in a way, that the sound signals can reach the audience unobstructedly. It will often be helpful to mount the speakers on tripods. Thus, the sound will be evenly spread with maximum range throughout the audience area.

Always use high grade cable to connect your equipment. Otherwise you won't reach maximum sound quality.

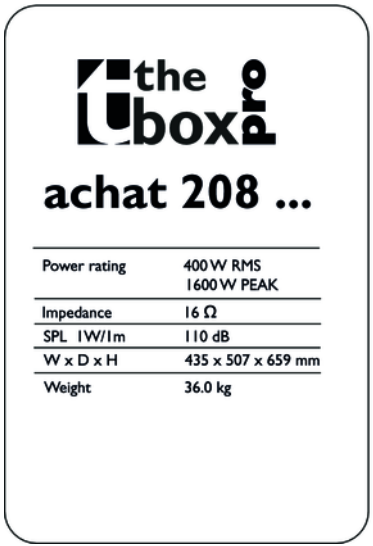
For optimum results both impedance and power handling of the speakers must match the requirements of the amplifier. Always follow the technical specifications of the speakers! The overall impedance of the connected loudspeakers must not deceed the minimum output impedance of the amp. The amps max. RMS output power should be 50 % above the power handling capacity of the connected speakers.

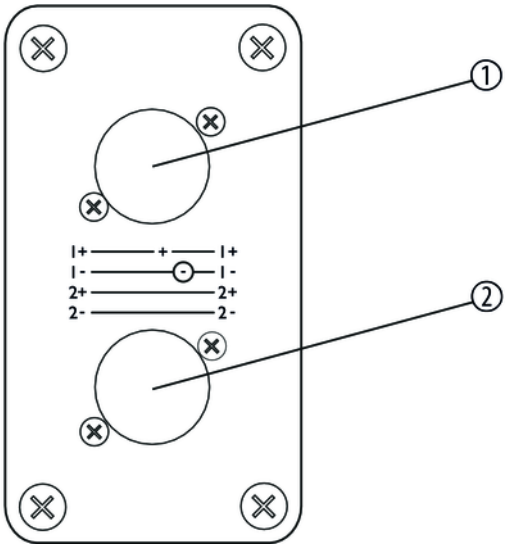
If you notice distortion during operation, either the amp or the speaker is overloaded. This may permanently damage the amp or the speaker. Always reduce the volume when you hear distortion.

4.2 Hanging the speaker box

To hang the speaker box on special mounting devices (aka 'flying') both sides of the box offer built-in Aeroquip or fly tracks. In these tracks safety eyelets (double studs) can be screwed or latched. Check the secure connection of the safety eyelets with the box carefully, before you use it in 'flying mode'.

4.3 Connections





1, 2	NL4 connections wired in parallel (1+,1– through-connected and assigned; 2+, 2– through-connected and not assigned)

4.4 Setup options

The Achat 208 HL (left-hand version) and the Achat 208 HR (right-hand version) are always operated in pairs. The side where the horn is located is marked with a grooved line and with "AIM". When viewed from the front, the grooved line shows the vertical orientation of the horn (8° downwards).

This allows you to see where the main radiation axis hits the ground and you can determine the range of the box via the height in which it is operated.

In single and double block setups, the lines always point to the stage centre.

In all applications, the use of additional woofers covering the range from low bass frequencies to the crossover frequency is recommended. Due to the achievable level of the Achat 208, at least a double 18“ woofer should be used for each Achat 208.

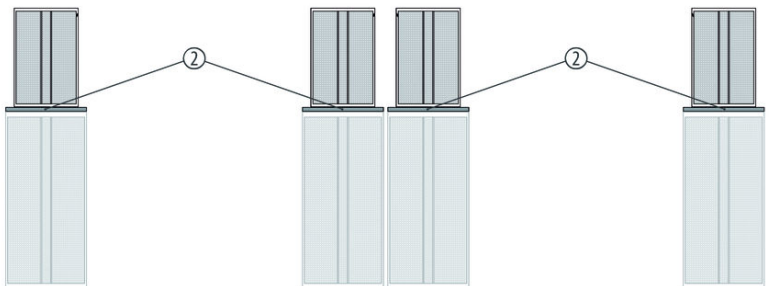
The Achat stack board is recommended as an adapter plate that can be put on all woofers of the Achat series (from Achat 115 SUB onwards) and engages there.

In double or quad block configurations, two Achat 208 each are set on top of one another. To this end, they are fixed together with the optionally available link bars.

Single setup at both sides of the stage

1	Grooved line marks the side where the horn is located
2	Adapter plate

Single setup at both sides and in the centre of the stage



2	Adapter plate

When you spread the two centre loudspeakers by approximately 10 cm, you will get a more even acoustic diffusion (about 100° horizontally).

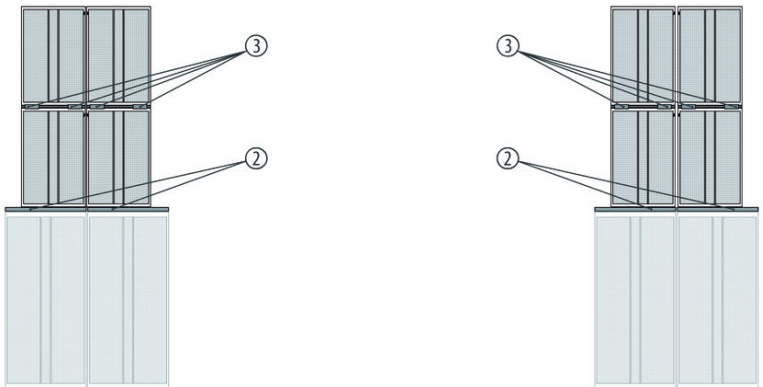
When the box walls of the the two centre loudspeakers are located directly to one another, maximum coupling with a high concentration of the medium frequencies is achieved.

Double block at both sides of the stage

2	Adapter plate
3	Link Bars for coupling two Achat 208

Quad block at both sides of the stage

The highest range is achieved with this setup.



2	Adapter plate
3	Link Bars for coupling two Achat 208

5 Technical data

System	High-performance mid-range speaker system, left horn (208 HL)
Configuration	2 × 8" mid-frequency transducers, 1.4" high-frequency driver
Power handling	400 W (RMS), 1600 W (peak)
Impedance	16 Ω, for single setup
	8 Ω, double block
	4 Ω, quad block
Maximum SPL	136 dB, for single setup
	142 dB, quad block
Frequency range	150 Hz … 20 kHz (–3 dB)
Dispersion (V × H)	60° × 40° (mid-range transducers)
Dimensions (W × H × D)	435 mm × 670 mm × 475 mm
Weight	36 kg

6 Plug and connection assignment

Introduction

This chapter will help you select the right cables and plugs to connect your valuable equipment in such a way that a perfect sound experience is ensured.

Please note these advices, because especially in 'Sound & Light' caution is indicated: Even if a plug fits into the socket, an incorrect connection may result in a destroyed power amp, a short circuit or 'just' in poor transmission quality!

NL4 mounting connectors

1, +	Signal 1 (in phase)
1, –	Signal 1 (180 degree phase shift)
2, +	Signal 2 (in phase)
2, –	Signal 2 (180 degree phase shift)

7 Protecting the environment

Disposal of the packaging material

For the transport and protective packaging, environmentally friendly materials have been chosen that can be supplied to normal recycling.

Ensure that plastic bags, packaging, etc. are properly disposed of.

Do not just dispose of these materials with your normal household waste, but make sure that they are collected for recycling. Please follow the notes and markings on the packaging.

Disposal of your old device

This product is subject to the European Waste Electrical and Electronic Equipment Directive (WEEE). Do not dispose with your normal household waste.

Dispose of this device through an approved waste disposal firm or through your local waste facility. When discarding the device, comply with the rules and regulations that apply in your country. If in doubt, consult your local waste disposal facility.